UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,365	11/01/1999	CARL G DEMARCKEN	09765/021001	8582

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EXAMINER
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ART UNIT	PAPER NUMBER
3626	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/431,365	DEMARCKEN, CARL G
	Examiner	**Art Unit**	
	Rachel L. Porter	3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 September 2004</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4,6-8,27,28 and 52-59* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-4,6-8,27,28 and 52-59* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Notice to Applicant

1.   This communication is in response to the amendments received on 9/1/04.

Claims 1-4,6-8 and 27-28, and 52-59 are pending. Claims 5, 9-26, and 29-51 have

been cancelled.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-4,6-8 and 27-28, and 52-59 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Claim 1 recites "a module to define the set of diverse travel requirements by

establishing a plurality of travel requirement templates, and for each travel requirement

template, defining a plurality of travel requirements." While the Examiner acknowledges

applicants attempts to clarify the claim language in the arguments presented in the

response filed 9/1/04, the Examiner submits that the language of the claims as

presently recited is still unclear.   The current claim language seems somewhat

"circular" in that the claimed module apparently defines a set of travel requirements by

establishing travel requirement templates, which are defined by travel requirements.

The Examiner will interpret and apply art to the claim as best as possible in light

of the 112, 2nd issues that remain in the present claim.

Claims 2-4,6-8, and 27-28 inherit the deficiencies of claim 1 through dependency, and are therefore also rejected.

The analysis of claim 1 may also be applied to claims 52 and 56, which have similar wording.

Claims 53-54 and 58-59 inherit the deficiencies of their respective independent claims, and are therefore also rejected.

Claim 55 is indefinite because it is unclear how the present claim further limits claim 52 or what steps are being performed in the present claim. In particular, it appears the current claim is missing language, as it recites, "wherein values for the travel requirement template of particular carriers with corresponding travel requirements including a first particular airline and a second, different particular airline." It is noted that the Applicant has attempted to explain the meaning of the claim language in the arguments presented in the response submitted on 9/1/04. However, the Applicants quoted explanation or interpretation of the language of claim 55 does not reflect the language that is currently recited. For purposes of applying art, the Examiner will interpret the claim language to mean that the travel requirement template includes multiple (i.e. a first and second) carriers.

A similar analysis may be applied to claim 59, which has similar wording.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-4, 6-8,27-28,54, and 56-58 are rejected under 35 U.S.C. 103(a) as

being unpatentable over DeMarcken et al (USPN 6,295,521-referred to hereinafter as

DeMarcken '521) in view of Karch (USPN 6,442,537).

As per claims 1 and 2, DeMarcken'521 teaches a travel planning system comprising:

-       a requirements generator module to generate a set of diverse travel requirements

including a module to generate a plurality of diverse travel requirements (e.g. user

interface) (col. 3, line 55-col. 4, line 62), that allows a plurality of travel requirements

to be entered. (see 112, 2nd paragraph)

-       a selection module to output a set of diverse travel options smaller than a candidate

set of travel options by selecting from the candidate set of travel options, for each

diverse travel requirement in the plurality of diverse travel requirements, one or more

travel options that satisfy that travel requirement, and wherein the candidate set of

travel options is represented using a data structure that compactly stores the

candidate set of travel options as a graph data structure (col. 4, lines 43-63; col. 5,

line 25-col. 6, line 27;col. 45, lines 23-28)

DeMarcken teaches the use of travel requirements to determine travel options

(DeMarcken: col. 3, line 55-col. 4, line 62) but fails to expressly teach defining a

template of rules. However, it is respectfully submitted that this feature is old and well known in the art, as evidenced by Karch's teaching of defining and customizing a template of rules for a plurality of purposes (Karch col. 1, line 66-co1. 2, line 6). At the time of the Applicant's invention it would have been obvious to one of ordinary skill in art to modify the system of DeMarcken with the teaching of Karch to include the feature of generating rule templates (e.g. for travel requirements). As suggested by Karch, one would have been motivated to include this feature to provide an efficient rules system that can learn and manipulate information, but does not result in significant degradation of performance through the use of extensive amounts processing power (Karch; col. 1, lines 38-42).

As per the limitations of claim 3, see DeMarcken'521: col. 4, lines 14-41.

As per claim 4, DeMarcken'521 teaches a travel planning system further comprising:

- a travel option generator module to generate a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function, and (col. 5, line 26-col. 6, line 6)

- wherein the selection module to output a set of diverse travel options by selecting a first and second number of travel options from each of the first and second ordered set of travel options. (col. 4, lines 43-col. 5, line 25; col. 49, line 30-col. 50, line 39; Figure 3)

As per claim 6, DeMarcken'521 teaches the travel planning system of claim 1 wherein at least one of the travel requirements within the plurality is not a user entered travel requirement. (col. 4, lines 1-14)

As per claims 7 and 8, DeMarcken'521 teaches the travel planning system of claim 1 wherein diverse travel requirements comprise at least one of: trips on a particular carrier, non-stop travel, outbound travel departing in a predefined time period (e.g. morning, afternoon, evening or a predefined date), return trips departing in a predefined time period, non-stop travel on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date. (col. 17,line 20-col. 19, line 32)

As per claim 27, DeMarcken'521 teaches the travel planning system of claim 1 wherein the compact data structure comprises a directed acyclic graph. (col. 5, line 25-col. 6, line 27)

As per claim 28, DeMarcken'521 teaches a travel planning system wherein the compact data structure comprises a grammar. (col. 45, lines 23-28)

As per claim 52, DeMarcken teaches a method for generating a diverse set of travel options, the method comprising:

- determining a candidate set of travel options, the candidate set of travel options being based on user input and represented using a data structure that compactly stores the candidate set of travel options; (col. 5, line 25-col. 6, line 6)

- generating a diverse set of travel requirements/defining a plurality of travel
  requirements (col. 3, line 55-col. 4, line 62-see 112, 2nd paragraph)

- selecting from the candidate set of travel options a travel option that satisfies that
  travel requirement; (col. 3, line 55-col.5, line 35)

- combining the selected travel options for the travel requirements to generate the
  diverse set of travel options; and (Table 2; col. 9, line 54-col. 10, line 7; col. 15, lines
  54-col. 17, line 19)

- displaying the diverse set of travel options to a user. (col. 5, line 36-col. 6, line 6)

DeMarcken teaches the use of travel requirements to determine travel options

(DeMarcken: col. 3, line 55-col. 4, line 62) but fails to expressly teach

defining/generating a template of rules. However, it is respectfully submitted that this

feature is old and well known in the art, as evidenced by Karch's teaching of defining

and customizing a template of rules for a plurality of purposes (Karch col. 1, line 66-col.

2, line 6). At the time of the Applicant's invention it would have been obvious to one of

ordinary skill in art to modify the system of DeMarcken with the teaching of Karch to

include the feature of generating rule templates (e.g. for travel requirements). As

suggested by Karch, one would have been motivated to include this feature to provide

an efficient rules system that can learn and manipulate information, but does not result

in significant degradation of performance through the use of extensive amounts

processing power (Karch; col. 1, lines 38-42).

As per claims 53, DeMarcken teaches a method for generating travel

requirements (col. 3, line 55-col. 5, line 32) as explained in the rejection of claim 52, but

does not expressly disclose the generation of template rules. However, the development and customizing a template of rules for a plurality of purposes is old and well known in the art, as evidenced by Karch. (Karch col. 1, line 66-co1. 2, line 6). At the time of the Applicant's invention it would have been obvious to one of ordinary skill in art to modify the method of DeMarcken with the teaching of Karch to generate rule templates wherein values for a particular travel requirement template are based on a candidate set of travel options. As suggested by Karch, one would have been motivated to include this feature to provide an efficient rules system that can learn and manipulate information, but does not result in significant degradation of performance through the use of extensive amounts processing power (Karch; col. 1, lines 38-42).

As per claim 54, DeMarcken teaches a method for generating travel requirements (col. 3, line 55-col. 5, line 32), including particular carriers, number of stops, outbound travel departing in a predefined time period, return travel departing in a predefined time period, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date. (col. 3, lines 43-51; col. 17,line 20-col. 19, line 32). DeMarcken does not expressly disclose the generation of template rules. However, the development and customizing a template of rules for a plurality of purposes is old and well known in the art, as evidenced by Karch. (Karch col. 1, line 66-co1. 2, line 6). At the time of the Applicant's invention it would have been obvious to one of ordinary skill in art to modify the method of DeMarcken with the teaching of Karch to generate rule templates which include particular travel limitations. (e.g particular carriers, number of stops, outbound travel departing in a predefined time

period, return travel departing in a predefined time period, or travel with an outbound

departure on a first predefined date and a return arrival on a second predefined date).

One would have been motivated to include this feature to provide an efficient rules

system that can learn and manipulate information, but does not result in significant

degradation of performance through the use of extensive amounts processing power

(Karch; col. 1, lines 38-42) and to address the specific (e.g. travel) problem being

solved. (Karch: col. 2, lines 14-23)

As per claim 56, the present claim repeats the subject matter of claim 29 as an

article of manufacture encoding the instructions that cause a computer processor to

perform the method of claim 52 rather than as a series of steps. As the underlying

process has been shown to be fully computer enabled and disclosed by the teachings of

DeMarcken'521 in the above rejection of claim 52, it is readily apparent that the

DeMarcken'521 reference includes an article of manufacture encoding the instructions

that cause a computer to perform the recited functions. As such, these limitations are

rejected for the same reasons provided in the rejection of claim 52 and incorporated

herein.

The limitations of claim 57 are substantially similar to those of claim 53. As such

the limitations of claim 57 are addressed by claims 53 and 56, and incorporated herein.

As per claim 58, the limitations of the present claim are addressed by the

rejections of claims 54 and 56, and incorporated herein.

6.   Claims 55 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable

over DeMarcken and Karch (USPN 6,442,537), in further view of Iyengar et al (USPN

6,360,205).

        As per claim 55, DeMarcken and Karch in combination teach a method including

the use of travel requirements templates, as explained in the rejection of claim 54, but

do not expressly disclose that that the travel requirement template includes multiple (i.e.

a first and second) carriers.   Iyengar teaches a system/method wherein a travel

requirements template includes a plurality of carriers. (Figures 6-10; col. 21, lines 10-18)

At the time of the Applicant's invention, it would have been obvious to one of ordinary

skill in the art to further modify the method of DeMarcken and Karch in combination with

the teaching of Iyengar to include a plurality of carriers on the travel requirements

template. As suggested by Iyengar, one would have been motivated to include this

feature to facilitate consumer access to the best prices (col. 2, lines 49-59) and to allow

consumers to make meaningful comparisons among a number of travel service data

sources (col. 4, lines 26-35).

        As per claim 59, the limitations of the present claim are addressed by the

rejection of claims 55 and 56, and incorporated herein.

Response to Arguments

7.   Applicant's arguments filed 9/1/04 have been fully considered but they are not

persuasive.

(A)   On pages 9-12 of the response, the Applicant argues that the claim language of

claim 1 (formerly claim 5) is not unclear or "circular."

While the Examiner acknowledges the Applicant's attempts to clarify the claim

language in the arguments, the Examiner respectfully disagrees and has maintained the

112, 2nd paragraph rejections.

(B)   On pages 12-15, the Applicant argues the previous grounds of rejection provided

in the previous Office Action.

A new art rejection has been provided for Applicant's consideration in the present

Office Action. Therefore Applicant's arguments have been considered but are moot in

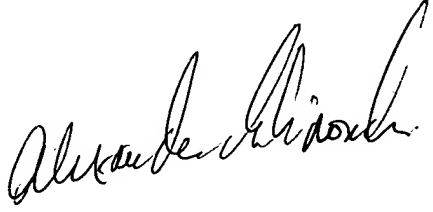view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Rachel L. Porter whose telephone number is 703-305-

0108. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Thomas can be reached on (703) 305-9588. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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ALEXANDER KALINOWSKI
PRIMARY EXAMINER